

### REMARKS/ARGUMENTS

The claims are 3, 4, 6-9, and 11-17. Method claim 1 has been canceled, and device claim 2 has been canceled in favor of new claim 16 to better define the invention. New claim 16 incorporates subject matter previously appearing in claims 5 and 10. Accordingly, claims 5 and 10 have been canceled, and claims 3, 4 and 6-9, which previously depended on claim 2, have been amended to define on new claim 16. In addition, claims 11, 12, 14 and 15, which previously depended on claim 10, have been amended to depend on new claim 16. New claim 17, dependent on claim 16, has been added to more specifically recite the structure of the microscope. Support for the claims may be found, *inter alia*, in the disclosure at pages 3-4, FIG. 1, and the original claims. Reconsideration is expressly requested.

Claims 1-5, 8-10 and 12-15 were rejected under 35 U.S.C. 102(b) as being anticipated by *West U.S. Patent No. 4,963,018*. The remaining claims were rejected under 35 U.S.C. 103(a) as being unpatentable over *West*. Essentially the Examiner has repeated his previous position set forth in the November 27, 2007 Office Action. The Examiner has also indicated that the *West*

ranging apparatus depicts an image of the cylinder wall because of the statement at column 3, lines 10-15 of *West* concerning focusing an image of the cylinder wall. In the Examiner's view, because an image of the cylinder wall is obtained by *West's* device, this image provides information about the surface condition. The Examiner also indicated that *West* teaches confocal microscopy because in the Examiner's view "confocal" means the two objectives have the same foci, and elements 51 and 46 have the same foci as seen in FIG. 1 of *West*. The Examiner also believes that *West* can be considered a confocal microscope because *West's* apparatus is used to view small objects.

This rejection is respectfully traversed.

As set forth in new claim 16, Applicant's invention provides a device for producing three-dimensional surface images of internal surfaces of cylinders in engine blocks that includes a computer-controlled confocal microscope. The microscope has a microscope body, a tube attached to the microscope body and a lens, which is preceded by a deflection optical system having a horizontal translator. The deflection optical system deflects the beam by less than 90 degrees. The device further includes a

device for attaching and adjusting the computer-controlled confocal microscope to be moved into the cylinders in engine blocks, to measure the internal surface of the cylinders.

As more specifically recited in new claim 17, the microscope body includes a motor-driven Nipkow disk, a beam splitter, a light source, and a CCD camera.

By using a confocal microscope and the corresponding lens, and having the deflection optical system deflected by less than 90 degrees, it is possible to build a device for producing three-dimensional surface images of cylinders in engine blocks, having a small construction, which allows it to penetrate as deep as possible into the cylinder in order to generate three-dimensional surface images.

West is primarily concerned with determining the distance of the measurement device from the wall to be detected, in order to thereby be able to determine whether the cylinder is round or oval. Three-dimensional images of the surface are not produced in this connection. Although the Examiner has taken the position that small objects are observed in West, which indicates that the

West device is also a microscope, it is respectfully submitted that this statement amounts to a mere assertion that is unsupported by the disclosure of West.

In addition, it is respectfully submitted that the Examiner's definition of a confocal microscope (two lenses having the same foci) is unfounded and would not be considered correct by one skilled in the art, which is corroborated by Applicant's confocal microscope that does not have two lenses.

In contrast to West, Applicant's device includes a confocal microscope. Confocal measurement microscopes are used to measure both the microscopic image (light intensity) of the sample surface and the local height assigned to the surface. A confocal microscope that also works with normal white light is therefore an advantageous alternative to laser measurement devices. The term "confocal" relates to the movement of a two-dimensional structure through the focal plane and the recording of a series of images. The confocal measurement technique is described in the enclosed article by Hans J. Tiziani and Hans-Martin Uhde, "Three-dimensional analysis by a microlens-array confocal arrangement."

New claim 17 further defines the structure of Applicant's confocal microscope, which is it respectfully submitted is nowhere disclosed or suggested by *West*.

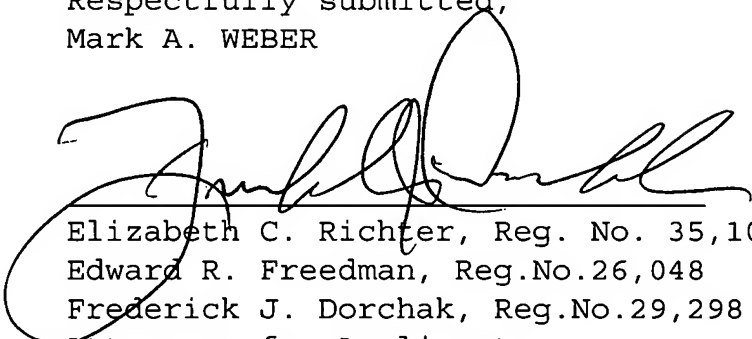
Accordingly, it is respectfully submitted that new claim 16, together with claims 3, 4, 6-9, 11-16 and 17, which depend directly or indirectly thereon, are patentable over the cited reference to *West*.

In summary, claims 3, 4, 6-9, 11-12 and 14-15 have been amended, claims 1-2, 5, and 10 have been canceled, and new claims 16 and 17 have been added. In view of the foregoing, it is respectfully requested that the claims be allowed and that this case be passed to issue.

Applicant also submits herewith a Second Supplemental Information Disclosure Statement citing the Tiziani and Uhde article.

Respectfully submitted,  
Mark A. WEBER

COLLARD & ROE, P.C.  
1077 Northern Boulevard  
Roslyn, New York 11576  
(516) 365-9802



Elizabeth C. Richter, Reg. No. 35,103  
Edward R. Freedman, Reg.No.26,048  
Frederick J. Dorchak, Reg.No.29,298  
Attorneys for Applicants

FJD:cmm

Enclosures: Check in the amount of \$405.00, Second Supplemental Information Disclosure Statement, Copy of Petition for one-month Extension of Time, Check for \$60.00

**EXPRESS MAIL NO. EM 145 117 280 US**  
**Date of Deposit: November 30, 2007**

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR §1.10, on the date indicated above, and is addressed to the Commissioner for Patents, U.S. PTO, Mail Stop PATENT Application, P.O. Box 1450, Alexandria, VA 22313-1450.



Amy Klein